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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/615,985

07/10/2003

Osamu Morita

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1240

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09/22/2004

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EXAMINER

STEPHENS, JUANITA DIONNE

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/615,985

Applicant(s)

MORITA ET AL.

Examiner

Juanita D. Stephens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 10 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 30-32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/10/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/386,359.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claims 1-29 cancel in Amendment filed 7/10/03.

#### ***Specification***

1. The disclosure is objected to because of the following informalities:

In the Amendment to the Specification filed 7/10/03, after "filed July 10, 2002," insert --which issued as U.S. Patent 6,705,715 on March 16, 2004, --  
Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 30-32, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Altfather et al. (US 5,977,121).

Altfather et al. discloses a liquid container (cartridge 10) (Fig. 2) comprising: **1)** a liquid containing portion (container 16) in which liquid is to be contained (col 4, Ins 52-54), **2)** a liquid supply orifice (ink outlet 35) which supplies the liquid contained in said liquid containing portion to outside (col 5, Ins 39-40), **3)** a plurality of approximately-polygonal prisms (light directing elements 21 and 22) made of light-transmitting material, each having a surface integrated with an external wall (17A) surface of said

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liquid containing portion as well as a plurality of reflection surfaces, different from said external wall surface, which serve as an optical interface with respect to the liquid, and which have a predetermined angle with respect to an optical path of light emitted from a light source in a predetermined position outside said liquid containing portion (col 6, Ins 29-55), **4)** wherein said plurality of prisms (21 and 22) are arranged in a top edge direction of said plurality of prisms (Fig. 2), **5)** wherein said liquid container has a shape with a flat lengthwise direction, (direction in which wall 17A extends) (Fig. 2), and the top edge direction of said plurality of prisms is in the same direction as the flat lengthwise direction of said liquid container (col 6, Ins 29-30, Ins 42-43; Fig. 2), **6)** wherein said liquid container used in a printing apparatus (printer 8) which includes scanning means (carriage 12) for holding and scanning said liquid container (col 4, Ins 50-52; col 4, In 67-col 5, In 8), and wherein a scanning direction of said scanning means is crossed to the top edge direction of said plurality of prisms when said scanning means hold said liquid container (Figs. 1 and 2), and **7)** wherein said liquid containing portion is divided into plural portion (first chamber 40 and second chamber 42) by at least on portioning wall (dividing member 44), and wherein said plurality of prisms are provided in an interior side of one of the plural portion ( prisms 21 and 22 are located in the interior of second chamber 42), each having a communicating path (ink inlet 41) with a neighboring portion (col 5, Ins 55-60).

***Allowable Subject Matter***

4. Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The limitation of wherein said plurality of prisms are provided on the same surface of said liquid container where the liquid supply orifice is provided. This invention solves the problem of detecting residual ink by a single optical unit even if there is an error in attachment of tank holder to the ink tank or attachment of tank holder to the carriage.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art of Williams (US 4,788,444) discloses a liquid container (Fig. 1) comprising: a liquid containing portion in which liquid is to be contained, a liquid supply orifice which supplies the liquid contained in said liquid containing portion to outside, a plurality of approximately-polygonal prisms made of light-transmitting material, each having a surface integrated with an external wall surface of said liquid containing portion as well as a plurality of reflection surfaces, different from said external wall surface, which serve as an optical interface with respect to the liquid, and which have a predetermined angle with respect to an optical path of light emitted from a light source

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in a predetermined position outside said liquid containing portion (Fig. 2), wherein said plurality of prisms are arranged in a top edge direction of said plurality of prisms, wherein said liquid container has a shape with a flat lengthwise direction, and the top edge direction of said plurality of prisms is in the same direction as the flat lengthwise direction of said liquid container, **but does not disclose** wherein said liquid container used in a printing apparatus which includes scanning means for holding and scanning said liquid container, and wherein a scanning direction of said scanning means is crosses to the top edge direction of said plurality of prisms when said scanning means hold said liquid container, wherein said liquid containing portion is divided into plural portion by at least on portioning wall, and wherein said plurality of prisms are provided in an interior side of one of the plural portion each having a communicating path with a neighboring portion.

#### **Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Juanita Stephens", with a stylized flourish at the end.

Juanita D. Stephens  
Primary Examiner  
Art Unit 2853

September 16, 2004